NCBI PubMed National Library of Medicine NLM

PubMed Nucleotide Protein Genome Structure PopSet Taxonomy OMIM Book

Search PubMed for slim3 Go Clear

Limits Preview/Index History Clipboard Details

Entrez PubMed

Display Summary Sort Save Text Add to Clipboard

Show: 20 Items 1-2 of 2 One

PubMed Services

1: Chu PH, Bardwell WM, Gu Y, Ross J Jr, Chen J. Related A

FHL2 (SLIM3) is not essential for cardiac development and function.
Mol Cell Biol. 2000 Oct;20(20):7460-2.
PMID: 11003643 [PubMed - indexed for MEDLINE]

2: Morgan MJ, Madgwick AJ. Related Articles, Nucleotide, OMIM, F

Slim defines a novel family of LIM-proteins expressed in skeletal muscle.
Biochem Biophys Res Commun. 1996 Aug 14;225(2):632-8.
PMID: 8753811 [PubMed - indexed for MEDLINE]

Related Resources

Write to the Help Desk
NCBI | NLM | NIH
Department of Health & Human Services
Freedom of Information Act | Disclaimer

1: Morgan MJ, Madgwick AJ. Related Articles, Nucleotide, OMIM, F

Slim defines a novel family of LIM-proteins expressed in skeletal muscle.
Biochem Biophys Res Commun. 1996 Aug 14;225(2):632-8.
PMID: 8753811 [PubMed - indexed for MEDLINE]

2: Morgan MJ, Madgwick AJ, Charleston B, Pell JM, Loughna PT. Related Articles, Nucleotide, OMIM, F

The developmental regulation of a novel muscle LIM-protein.
Biochem Biophys Res Commun. 1995 Jul 26;212(3):840-6.
PMID: 7626119 [PubMed - indexed for MEDLINE]

3: Reese DE, Bader DM. Related Articles, Nucleotide, OMIM, F

Cloning and expression of hbves, a novel and highly conserved mRNA expres
the developing and adult heart and skeletal muscle in the human.
Mamm Genome. 1999 Sep;10(9):913-5.
PMID: 10441744 [PubMed - indexed for MEDLINE]

4: Jackson VN, Price NT, Halestrap AP. Related Articles, Nucleotide, F

cDNA cloning of MCT1, a monocarboxylate transporter from rat skeletal musc
Biochim Biophys Acta. 1995 Sep 13;1238(2):193-6.
PMID: 7548134 [PubMed - indexed for MEDLINE]

5: Davoli R, Zambonelli P, Bigi D, Fontanesi L, Russo V. Related Articles, Nucleotide, F

Analysis of expressed sequence tags of porcine skeletal muscle.
Gene. 1999 Jun 11;233(1-2):181-8.
PMID: 10375634 [PubMed - indexed for MEDLINE]

6: Morgan MJ, Madgwick AJ. Related Articles, Nucleotide, F

The LIM proteins FHL1 and FHL3 are expressed differently in skeletal muscle.
Biochem Biophys Res Commun. 1999 Feb 16;255(2):245-50.
PMID: 10049693 [PubMed - indexed for MEDLINE]

7: Taske NL, Eyre HJ, O'Brien RO, Sutherland GR, Denborough MA, Foster PS. Related Articles, Nucleotide, OMIM, F

Molecular cloning of the cDNA encoding human skeletal muscle triadin and its localisation to chromosome 6q22-6q23.
Eur J Biochem. 1995 Oct 1;233(1):258-65.
PMID: 7588753 [PubMed - indexed for MEDLINE]

☐ **8:** Passier R, Richardson JA, Olson EN. Related Articles, Nucleotide, F
Oracle, a novel PDZ-LIM domain protein expressed in heart and skeletal muscl
Mech Dev. 2000 Apr;92(2):277-84.
PMID: 10727866 [PubMed - indexed for MEDLINE]

☐ **9:** Racevskis J, Dill A, Sparano JA, Ruan H. Related Articles, Nucleotide, F
Molecular cloning of LMO41, a new human LIM domain gene.
Biochim Biophys Acta. 1999 Apr 14;1445(1):148-53.
PMID: 10209267 [PubMed - indexed for MEDLINE]

☐ **10:** Fu L, Wong JA, Schneider EG, Thomason DB. Related Articles, Nucleotide, F
Unique 5'-end of a Na(+)-K(+)-2Cl- cotransporter-like mRNA expressed in rat skeletal muscle.
DNA Seq. 1999;10(2):127-32.
PMID: 10376216 [PubMed - indexed for MEDLINE]

☐ **11:** Hanazono M, Ozawa A, Yasue H. Related /
The cDNA sequence of porcine vitronectin and its expression in liver and skele muscle of GH-supplemented pigs.
J Vet Med Sci. 1996 Oct;58(10):989-94.
PMID: 8915999 [PubMed - indexed for MEDLINE]

☐ **12:** Shukunami C, Oshima Y, Hiraki Y. Related /
Molecular cloning of tenomodulin, a novel chondromodulin-I related gene.
Biochem Biophys Res Commun. 2001 Feb 9;280(5):1323-7.
PMID: 11162673 [PubMed - indexed for MEDLINE]

☐ **13:** Geisler JG, Stubbs LJ, Wasserman WW, Mucenski ML. Related Articles, Nucleotide, F
Molecular cloning of a novel mouse gene with predominant muscle and neural expression.
Mamm Genome. 1998 Apr;9(4):274-82.
PMID: 9530622 [PubMed - indexed for MEDLINE]

☐ **14:** Arregui CO, Mas CR, Argarana CE, Barra HS. Related /
Tubulin tyrosine ligase: protein and mRNA expression in developing rat skeleta muscle.
Dev Growth Differ. 1997 Apr;39(2):167-78.
PMID: 9108330 [PubMed - indexed for MEDLINE]

☐ **15:** Damon M, Vincent A, Lombardi A, Herpin P. Related Articles, Nucleotide, F
First evidence of uncoupling protein-2 (UCP-2) and -3 (UCP-3) gene expressio piglet skeletal muscle and adipose tissue.
Gene. 2000 Apr 4;246(1-2):133-41.
PMID: 10767534 [PubMed - indexed for MEDLINE]

☐ **16:** Gaillard C, Lerivray H, Theze N, Cooper B, Lepetit D, Mohun T, Thiebaud P. Related /
Differential expression of two skeletal muscle beta-tropomyosin mRNAs durin Xenopus laevis development.
Int J Dev Biol. 1999 Mar;43(2):175-8.
PMID: 10235394 [PubMed - indexed for MEDLINE]

☐ **17:** Buchberger A, Arnold HH. Related Articles, Nucleotide, F

The MADS domain containing transcription factor cMef2a is expressed in hear skeletal muscle during embryonic chick development.
Dev Genes Evol. 1999 Jun;209(6):376-81.
PMID: 10370120 [PubMed - indexed for MEDLINE]

☐ **18:** Lachuer J, Ronfort C, Duchamp C, Cohen-Adad F, Barges S, Faraut P, Quivet L, Legras C, Verdier G, Barre H. Related A

Characterization of a cDNA encoding an alpha thyroid hormone receptor in mu duckling.
Poult Sci. 1996 Dec;75(12):1531-5.
PMID: 9000280 [PubMed - indexed for MEDLINE]

☐ **19:** Raimbault S, Dridi S, Denjean F, Lachuer J, Couplan E, Bouillaud F, Bordas A, Duchamp C, Taouis M, Ricquier D. Related Articles, Nucleotide, F

An uncoupling protein homologue putatively involved in facultative muscle thermogenesis in birds.
Biochem J. 2001 Feb 1;353(Pt 3):441-4.
PMID: 11171038 [PubMed - indexed for MEDLINE]

☐ **20:** Yamazaki N, Shinohara Y, Shima A, Yamanaka Y, Terada H. Related Articles, Nucleotide, OMIM, F

Isolation and characterization of cDNA and genomic clones encoding human m type carnitine palmitoyltransferase I.
Biochim Biophys Acta. 1996 Jun 7;1307(2):157-61.
PMID: 8679700 [PubMed - indexed for MEDLINE]

Display Summary Sort Save Text Add to Clipboard C
Show: 20 Items 1-20 of 178 Page 1 of 9 Select page: 1 2 3 4 5 6

1: Mol Cell Biol 2000 Oct;20(20):7460-7462 Related Articles, Books, Li



# FHL2 (SLIM3) is not essential for cardiac development and func

**Chu PH, Bardwell WM, Gu Y, Ross J Jr, Chen J.**

Department of Medicine, School of Medicine, University of California at San D
La Jolla, California 92093-0613, USA.

LIM domain-containing proteins play critical roles in vertebrate development a
cellular differentiation. Recently, four members of the four and one-half LIM p
(FHL) family have been identified and cloned. One of these, FHL2, is expresse
restricted manner in the cardiovascular system throughout development into
adulthood, suggesting that FHL2 may play an important role in cardiovascular
development and function. Here we describe the generation and analysis of mic
carrying a null mutation of the FHL2 gene. FHL2-deficient mice are viable and
maintain normal cardiac function both before and after acute mechanical stress
induced by aortic constriction. These data suggest that FHL2 is not essential for
cardiac development and function.

PMID: 11003643 [PubMed - indexed for MEDLINE]

# Protein-protein interaction of FHL2, a LIM domain protein preferentially expressed in human heart, with hCDC47.

**Chan KK, Tsui SK, Ngai SM, Lee SM, Kotaka M, Waye MM, Lee CY, Fur KP.**

Department of Biochemistry, The Chinese University of Hong Kong, Hong Kor

Related Resources

In the yeast two-hybrid library screening, the heart-specific FHL2 protein was f to interact with hCDC47. In vitro interaction study between FHL2 protein and hCDC47 was demonstrated. From the results of domain studies by the yeast two-hybrid assay, the second and third LIM domains in conjunction with the fir LIM domain of FHL2 were identified to be important in binding with hCDC47. Besides, in Northern blot hybridization of human cancer cell lines, the highest F mRNA expression was detected in colorectal adenocarcinoma SW480 and HeL S3. Our results imply that FHL2 protein may associate with cancer developmen may act as a molecular adapter to form a multicomplex with hCDC47 in the nu thus it plays an important role in the specification or maintenance of the termin differentiated phenotype of heart muscle cells. Copyright 2000 Wiley-Liss, Inc.

PMID: 10649446 [PubMed - indexed for MEDLINE]

1: Gene 1998 Apr 14;210(2):345-350 Related Articles, Nucleotide, OMIM, Protein, L
Li



# Molecular cloning and characterization of FHL2, a novel LIM domain protein preferentially expressed in human heart.

**Chan KK, Tsui SK, Lee SM, Luk SC, Liew CC, Fung KP, Waye MM, Lee**

Department of Biochemistry, Chinese University of Hong Kong, Shatin, Hong K

A full-length cDNA clone encoding a novel LIM-only protein was isolated and sequenced from a human fetal heart cDNA library. This full-length clone consis 1416 base pairs and has a predicted open reading frame (ORF) encoding 279 an acids. The ORF of this polypeptide codes for the human heart-specific four and LIM-only protein 2 (FHL2). It possesses an extra zinc finger that is a half LIM domain and four repeats of LIM domain. When the human FHL2 cDNA probe used to hybridize with poly-A RNA of various human tissues, a very strong sign could be seen in heart tissues, and only moderately low signals could be detecte placenta, skeletal muscle and ovary. Virtually no signal could be detected in bra lung, liver, kidney, pancreas, spleen, thymus, prostate, testis, small intestine, co peripheral blood leukocyte. FHL2 was mapped to chromosome 2q12-q13 by fluorescent in-situ hybridization (FISH).

PMID: 9573400 [PubMed - indexed for MEDLINE]

1: J Cell Biochem 2001;80(3):293-303 Related Articles, Books, Li



# Protein-protein interaction of FHL3 with FHL2 and visualizatio their interaction by green fluorescent proteins (GFP) two-fusion fluorescence resonance energy transfer (FRET).

**Li HY, Ng EK, Lee SM, Kotaka M, Tsui SK, Lee CY, Fung KP, Waye MM**

Department of Biochemistry, The Chinese University of Hong Kong, Shatin, H Kong SAR, China.

LIM domain proteins are found to be important regulators in cell growth, cell fa determination, cell differentiation and remodeling of the cell cytoskeleton. Hum Four-and-a-half LIM-only protein 3 (FHL3) is a type of LIM-only protein that contains four tandemly repeated LIM motifs with an N-terminal single zinc fing (half LIM motif). FHL3 expresses predominantly in human skeletal muscle. In t report, FHL3 was shown to be a novel interacting partner of FHL2 using the ye two-hybrid assay. Furthermore, site-directed mutagenesis of FHL3 indicated tha LIM2 of FHL3 is the essential LIM domain for interaction with FHL2. Green fluorescent protein (GFP) was used to tag FHL3 in order to study its distributio during myogenesis. Our result shows that FHL3 was localized in the focal adhe and nucleus of the cells. FHL3 mainly stayed in the focal adhesion during myogenesis. Moreover, using site-directed mutagenesis, the LIM1 of FHL3 was identified as an essential LIM domain for its subcellular localization. Mutants o have given rise to a novel technique, two-fusion fluorescence resonance energy transfer (FRET), in the determination of protein-protein interaction at particular subcellular locations of eukaryotic cells. To determine whether FHL2 and FHL3 interact with one another and to locate the site of this interaction in a single inta mammalian cell, we fused FHL2 and FHL3 to different mutants of GFP and stu their interactions using FRET. BFP/GFP fusion constructs were cotransfected i muscle myoblast C2C12 to verify the colocalization and subcellular localizatio FRET. We found that FHL2 and FHL3 were colocalized in the mitochondria of C2C12 cells and FRET was observed by using an epi-fluorescent microscope equipped with an FRET specific filter set. Copyright 2001 Wiley-Liss, Inc.

PMID: 11135358 [PubMed - indexed for MEDLINE]